



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Rock Island Field Office

1511 47th Avenue

Moline, Illinois 61265

Phone: (309) 757-5800 Fax: (309) 757-5807



IN REPLY REFER
TO:

FWS/RIFO

August 29, 2008

Ms. Linda Holst, Chief
Water Quality Branch
United States Environmental Protection Agency
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Dear Ms. Holst:

This responds to your letter of June 6, 2008, requesting our assistance in indentifying the federally listed threatened or endangered species that may be impacted by amendments to Illinois' water quality standards (WQS). The proposed amendments are a revision to the state's dissolved oxygen (DO) and sulfate standards, and a site specific amendment to the total dissolved solids (TDS) standard for the Des Plaines River. Your letter listed fourteen federally listed threatened or endangered species to be considered in your biological evaluations. In this letter we provide information regarding the presence of threatened and/or endangered species for the entire State of Illinois and also specifically for Will County. Included in this list are the species you identified as well as species that should also be considered in your evaluations.

In the case of the site-specific TDS standard for a segment of the Des Plaines River, you requested detailed locational information regarding listed species in the action area. You described the action area for this standard as a portion of the Des Plaines River from the point of discharge from the ExxonMobil refinery located at Interstate 55 and Arsenal Road and continuing to the confluence with the Kankakee River. In your letter, you listed the following species as present in Will County: Indiana bat, Hine's emerald dragonfly, and eastern prairie fringed orchid. After contacting the Chicago Fish and Wildlife Service Field Office, we have determined the species you listed are not present in the action area. However, sheepnose mussels and spectaclecase mussels (both Federal candidate species) historically occurred in this area. It is our recommendation that both of these species be considered in your biological evaluation.

State of Illinois threatened or endangered species possibly affected by changes to WQS

<u>Classification</u>	<u>Common Name (Scientific Name)</u>
Endangered	Least tern (<i>Sterna antillarum</i>)
Endangered	Piping plover (<i>Charadrius melodus</i>)
Endangered	Gray bat (<i>Myotis grisescens</i>)
Endangered	Indiana bat (<i>Myotis sodalis</i>)
Endangered	Pallid sturgeon (<i>Scaphirhynchus albus</i>)
Endangered	Fanshell mussel (<i>Cyprogenia stegaria</i>) (= <i>C. irrorata</i>)
Endangered	Fat pocketbook pearlymussel (<i>Potamilus capax</i>)
Endangered	Higgins eye pearlymussel (<i>Lampsilis higginsii</i>)
Endangered	Pink mucket pearlymussel (<i>Lampsilis orbiculata</i>) (= <i>Plethobasis abrupta</i>)
Endangered	Clubshell mussel (<i>Pleurobema clava</i>)
Endangered	Orange-footed pearlymussel (<i>Plethobasis cooperianus</i>) (= <i>P. striatus</i>)
Endangered	Hine's emerald dragonfly (<i>Somatochlora hineana</i>)
Endangered	Illinois cave amphipod (<i>Gammarus acherondytes</i>)
Threatened	Decurrent false aster (<i>Boltonia decurrens</i>)
Threatened	Eastern prairie fringed orchid (<i>Platanthera leucophaea</i>)
Candidate	Eastern massasauga rattlesnake (<i>Sistrurus c. catenatus</i>)
Candidate	Sheepnose mussel (<i>Plethobasus cyphyus</i>)
Candidate	Spectaclecase mussel (<i>Cumberlandia monodonta</i>)

Will County candidate species possibly affected by changes to the TDS standard

<u>Classification</u>	<u>Common Name (Scientific Name)</u>
Candidate	Sheepnose mussel (<i>Plethobasus cyphyus</i>)
Candidate	Spectaclecase mussel (<i>Cumberlandia monodonta</i>)

The **least tern** (*Sterna antillarum*) is listed as endangered in Alexander and Jackson Counties (along the Mississippi River) and in Massac and Pope Counties (Ohio River). In addition, the following counties are considered to be potential habitat: Gallatin, Hardin, Madison, Pulaski, Wabash, and White Counties in Illinois. It nests on bare alluvial or dredged spoil islands and sand/gravel bars in or adjacent to rivers, lakes, gravel pits, and cooling ponds. It nests in colonies with other least terns and sometimes with the piping plover. There is no critical habitat designated for this species. It must not be harmed, harassed, or disturbed when present.

The **piping plover** (*Charadrius melodus*) is listed as endangered in the Great Lakes drainage area where it nests on sandy beaches, bare alluvial and dredged spoil islands adjacent to rivers, streams, lakes, and gravel pits. It nests in colonies with other piping plovers and sometimes with least terns. Although it is considered extirpated from Illinois, potential nesting

populations could be established along Lake Michigan in Lake and Cook Counties with proper isolation and habitat management.

The essential primary constituent elements for piping plover habitat include sand, gravel, or cobblestone beaches or spits. There must be sparse vegetation with less than 50% herbaceous or woody cover. Protective cover must be present in the form of small herbaceous patches, cobble, gravel, or debris (driftwood, wrack, root masses, dead shrubs). There must be the potential for dynamic ecological processes that create and maintain habitat. Also, the level of disturbance from human activities or domestic animals must be low.

A total of 201 miles of Great Lakes shoreline (extending 1640 feet inland) in 26 counties in Minnesota, Wisconsin, Michigan, Illinois, Indiana, Ohio, Pennsylvania, and New York is designated as Critical Habitat for the Great Lakes population of the piping plover. The total length of designated shoreline is divided among 35 separate critical habitat units. In Illinois, approximately 6.3 miles of Lake Michigan shoreline habitat was included in that designated unit. These units are located in Lake County and extend from 17th Street in Illinois Beach State Park, southward to the northern Waukegan Beach breakwater, but excludes the public beach and campground in the state park

The **gray bat** (*Myotis grisescens*) is listed as endangered in Alexander, Hardin, Jackson, Johnson, Madison, Pike, Pope, and Pulaski Counties, Illinois where it inhabits caves both summer and winter. A search for this species should be made prior to any cave-impacting activities.

The endangered **Indiana bat** (*Myotis sodalis*) is known to occur in several Illinois counties including Adams, *Alexander, Bond, Ford, *Hardin, Henderson, *Jackson, *Jersey, Johnson, *LaSalle, Lawrence, Madison, Macoupin, McDonough, *Monroe, Perry, Pike, *Pope, Pulaski, *Saline, Schuyler, Scott, *Union, and Vermillion (*counties with hibernacula; Critical Habitat - Blackball Mine, LaSalle County). Potential habitat for this species occurs statewide. Therefore, Indiana bats are considered to potentially occur in any area with forested habitat in any county in Illinois.

Indiana bats migrate seasonally between winter hibernacula and summer roosting habitats. Winter hibernacula include caves and abandoned mines. Females form nursery colonies under the loose bark of trees (dead or alive) and/or cavities, where each female gives birth to a single young in June or early July. A single colony may utilize a number of roost trees during the summer, typically a primary roost tree and several alternates. The species or size of tree does not appear to influence whether Indiana bats utilize a tree for roosting provided the appropriate bark structure is present.

During the summer, the Indiana bat frequents the corridors of small streams with riparian woods as well as mature upland forests. It forages for insects along stream corridors, within the canopy of floodplain and upland forests, over clearings with early successional vegetation

(old fields), along the borders of croplands, along wooded fencerows, over farm ponds, and in pastures.

The endangered **pallid sturgeon** (*Scaphirhynchus albus*) is found in the Mississippi River downstream of its confluence with the Missouri River. Illinois counties with known occurrences include the stretch of river below the Mel Price Lock and Dam 26: Alexander, Union, Jackson, Randolph, Monroe, St. Clair, and Madison Counties. The Chain of Rocks area in Madison County is a known spawning ground for this species. Little is known of its habitat preferences; however, it is suspected that sand/gravel bars may be utilized for spawning.

The endangered **fanshell mussel** (*Cyprogenia stegaria*) (= *C. irrorata*) is known to occur in the Wabash River (White County, IL). Potential habitat for this species occurs in Gallatin County, Illinois. This species inhabits gravel substrates in medium to large rivers of the Ohio River basin. Instream activities in the Wabash River will typically require a mussel survey to determine if listed species are present.

The **fat pocketbook pearlymussel** (*Potamilus capax*) is listed as endangered and is thought to be extirpated. It historically has been found in the Mississippi River in Hancock and Pike Counties, Illinois. Occurrences also include the Wabash River in Lawrence, Wabash, White and Gallatin Counties, Illinois; and in the Ohio River in Massac and Pope Counties. If the project area is located near a present or historic fat pocketbook mussel bed, it may be necessary to conduct a survey to determine the presence of the species.

The endangered **Higgins eye pearlymussel** (*Lampsilis higginsii*) is listed for the Mississippi River north of Lock and Dam 20 which includes Jo Daviess, Henderson, Mercer, and Rock Island Counties, Illinois. In addition, it is known from the Rock River downstream of the Steel Dam, Rock Island County, Illinois. Potentially, it may also occur in Adams, Carroll, Hancock, Pike, and Whiteside Counties, Illinois upstream of Lock and Dam 22 on the Mississippi River. This species prefers sand/gravel substrates with a swift current and is most often found in the main channel border or an open, flowing side channel.

While there is no designated critical habitat, the Higgins eye Recovery Team has designated habitats essential to the recovery of the species. These areas include Allamakee County, Iowa (river miles 655.8-658.4R); Harper's Slough area, Allamakee County, Iowa (river mile 639-641.4R); Marquette-McGregor area, Clayton County, Iowa (river mile 634-636); McMillan Island area, Clayton County, Iowa (river mile 616.4-619.1R); Cordova, Rock Island County, Illinois (river mile 503-505.5L); and Sylvan Slough, Rock Island, Illinois (river mile 485.5-486L).

The State of Illinois has also designated certain mussel refuge areas that contain this species. Their regulations would affect the commercial harvest of mussels on these refuges. If a

project is located near a known Higgins eye mussel bed, it may be necessary to conduct a survey to determine the presence of the species.

The endangered **pink mucket pearlymussel** (*Lampsilis orbiculata*) (= *Plethobasis abrupta*) is known to occur in the Ohio River. Current distribution exists in Massac County and potential habitat occurs in Alexander, Gallatin, Hardin, Pope, and Pulaski Counties, Illinois (counties bordering the Ohio River). This species inhabits gravel and sand substrates in moderate to fast-flowing water. Instream activities in the Ohio River will typically require a mussel survey to determine if pink mucket pearlymussels are present.

The endangered **clubshell mussel** (*Pleurobema clava*) is known to occur in the North Fork Vermilion River in Vermilion County. This species may potentially occur anywhere in the North Fork Vermilion River. The clubshell inhabits gravel or mixed sand and gravel substrates in medium to large rivers. Instream activities in the North Fork Vermilion River will typically require a mussel survey to determine if the clubshell is present. Historical records also show presence in the Wabash and Lower Ohio Rivers.

The endangered **orange-footed pearlymussel** (*Plethobasis cooperianus*) (= *P. striatus*) is known to occur in the Ohio River below confluence with Cumberland River. Current distribution exists in Pulaski County. Potential habitat for this species occurs in Alexander, Massac, and Pope Counties. This species inhabits gravel or mixed sand and gravel substrates. Instream activities in the Ohio River will typically require a mussel survey to determine if orange-footed pearlymussels are present.

The **Hine's emerald dragonfly** (*Somatochlora hineana*) is endangered in Will, Du Page, and Cook Counties, Illinois. It occupies cattail marsh and wet meadow habitats fed by shallow, spring fed creeks (primarily along the Des Plaines River).

The essential primary constituent elements for Hine's emerald dragonfly egg laying and larval development are found in wetlands with organic soils overlying dolomite bedrock. Those wetlands have shallow calcareous water from intermittent seeps and springs, emergent herbaceous and woody vegetation, crayfish burrows (that provide refuges for larva), and a sufficient prey base of aquatic insects and other invertebrates.

The essential primary constituent elements for Hine's emerald dragonfly adults are found in natural plant communities in or near the breeding/larval wetlands that have a sufficient prey base of small insect species. Those natural plant communities include fen, marsh, sedge meadow, dolomite prairie, the fringe (up to 328 feet) of shrubby and forested areas bordering those wetlands, and open corridors (non-forested) that adults use for movement and dispersal.

Critical habitat has been designated within 22 units encompassing approximately 13,221 acres in eight counties in Illinois, Michigan, and Wisconsin. Within the critical habitat units, only the areas that contain the primary constituent elements of Hine's emerald dragonfly habitat are

designated as critical habitat. In Illinois, there are seven units encompassing 2,995 acres in Cook, DuPage, and Will Counties.

The endangered **Illinois cave amphipod** is a small invertebrate found in only a few cave streams of the Illinois sinkhole plain in Monroe and St. Clair Counties of southwestern Illinois. The contamination of groundwater appears to be the greatest threat to this species.

The **decurrent false aster** (*Boltonia decurrens*) is listed as threatened and known to occur in St. Clair County, Illinois and St. Charles County, Missouri (Mississippi River floodplain), and Bureau, Cass, Fulton, Jersey, LaSalle, Madison, Marshall, Mason, Morgan, Peoria, Pike, Putnam, Schuyler, Scott, Tazewell, and Woodford Counties, Illinois (Illinois River floodplain). It is also considered to potentially occur in any county bordering the Illinois River and the counties bordering the Mississippi River between the mouths of the Missouri River and the Ohio River. It occupies disturbed alluvial soils in the floodplains of these rivers. There is no critical habitat listed for this species in Illinois.

The **eastern prairie fringed orchid** (*Platanthera leucophaea*) is listed as threatened for Cook, DuPage, Grundy, Henry, Iroquois, Kane, Lake, and McHenry Counties in Illinois. It may potentially occur in any Illinois county based on historical records and habitat distribution. It occupies wet grassland habitats. There is no critical habitat designated for this species. Federal regulations prohibit any commercial activity involving this species or the destruction, malicious damage, or removal of this species from Federal land or any other lands in knowing violation of State law or regulation, including State criminal trespass law. This species should be searched for whenever wet prairie remnants are encountered.

The **eastern massasauga** (*Sistrurus c. catenatus*) is a docile rattlesnake that is declining throughout its national range and is currently a Federal candidate species. The snake is currently believed to occur in Cook, Dupage, Lake, Will, Knox, Piatt, Fayette, and Clinton Counties, Illinois. Your proactive efforts to conserve this species now may help avoid the need to list the species under the Endangered Species Act in the future. Due to their reclusive nature, we encourage early project coordination to avoid potential impacts to massasaugas and their habitat.

The massasauga is often found in or near wet areas, including wetlands, wet prairie, or nearby woodland or shrub edge habitat. This often includes dry goldenrod meadows with a mosaic of early successional woody species such as dogwood or multiflora rose. Wet habitat and nearby dry edges are utilized by the snakes, especially during the spring and fall. Dry upland areas up to 1.5 miles away are utilized during the summer, if available.

At a minimum, project evaluations should contain delineations of whether or not massasauga habitat occurs within project boundaries. Descriptions should indicate the quality and quantity of massasauga habitat (holes, crayfish burrows, foraging area, or basking sites) that may be affected by the project. In cases where massasaugas are known to occur or potential habitat is

rated moderate to high, massasauga surveys may be necessary. Please contact this office for further information should massasauga or their habitat be suspected.

The **sheepnose mussel** (*Plethobasus cyphus*) is declining throughout its national range and is currently a Federal candidate species. Significant declines relative to its historical distribution and its small isolated remaining populations continue to be threatened due to habitat loss and degradation. Your proactive efforts to conserve these species now may help avoid the need to list the species under the Endangered Species Act in the future. We encourage early project coordination to avoid potential impacts to this mussel and its habitat.

The sheepnose mussel is primarily a larger-stream species occurring mainly in shallow shoal habitats with moderate to swift currents over coarse sand and gravel but includes mud, cobble, and boulders as well. This includes larger rivers with deep runs, while those specimens found in streams occur mainly in stable flow refuges with little sediment turbidity.

At a minimum, project evaluations should contain delineations of whether or not sheepnose mussel habitat occurs within project boundaries. In cases where the species is known to occur or potential habitat is rated moderate to high, surveys may be necessary. Please contact this office for further information should this species or their habitat be suspected.

Known occurrences of the sheepnose mussel in Illinois include Rock Island, Jo Daviess, Carroll, Mercer, Henderson, Hancock, Adams, Pike, Winnebago, Whiteside, Grundy, LaSalle, Mason, Schuyler, Morgan, Scott, Fulton, Will, Kankakee, Kane, Ford, Menard, Sangamon, Shelby, Fayette, Clinton, Washington, Gallatin, Alexander, Pulaski, Massac, Clark, Crawford, Lawrence, Wabash, White, and Jasper Counties. All counties bordering the Mississippi, Illinois, Kankakee, and Wabash Rivers should be considered potential habitat for this species.

The Federal candidate **spectaclecase mussel** (*Cumberlandia monodonta*) is primarily a large river species occurring most often in riverine microhabitats sheltered from main currents. Substrates include mud to boulders in shallow riffles and shoals with slow to swift currents. Occurrences tend to be aggregated especially under slabs and bedrock shelves protected from the current. The spectaclecase mussel seldom moves and when found in streams, occurs mainly in flow refuges with little sediment turbidity.

At a minimum, project evaluations should contain delineations of whether or not spectaclecase mussel habitat occurs within project boundaries. In cases where this species is known to occur or potential habitat is rated moderate to high, surveys may be necessary. Please contact this office for further information should this species or their habitat be suspected.

Known occurrences of the spectaclecase mussel in Illinois include Massac, Calhoun, Pike, Adams, Hancock, Rock Island, Mercer, Henderson, Will, Grundy, White, Wabash, Fulton, Mason, and Greene Counties.

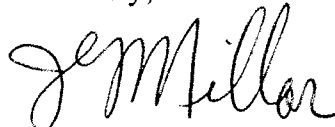
Ms. Linda Holst

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These comments are provided in accordance with the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq).

If you have any questions regarding our comments, please contact Aleshia Kenney of my staff at (309) 757-5800, extension 218.

Sincerely,


for Richard C. Nelson
Field Supervisor

cc: CIFO (Karecki)

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